

# CUBIT Capability Proposal

**Technical Area**

Geometry, Meshing, Infrastructure, GUI, Graphics, etc..

**Technical Lead**

Cubit Developer in charge of technical area

Meshing	
---------	--

**MRD Description**

Describe the capability in terms of how a user would see it.

Allow the user to nearly automatically mesh a complex assembly with a mix of all-hex volumes and tet volumes, creating a pyramid interface between as needed.
---

**SRS Description**

What needs to be done by Cubit developers to implement this capability? Break the tasks into steps if applicable. (Steps should be on the order of 2 man-weeks or more)

- |  |
|--|
| <ol style="list-style-type: none"><li>1. Get the tet-to-pyramid code out of mothballs and spruce up</li><li>2. Write tet cleanup code so that the resulting tets near the pyramid interface look decent</li><li>3. Modify cubit infrastructure to handle volumes with multiple element types easily. Currently having a mixed mesh in a volume is not handled well in terms of output blocks</li><li>4. Modify Meshing powertool to do this semi-automatically</li></ol> |
|--|

**Justification**

Describe why this is important and what impact it will have if it is implemented. (or not implemented).

**Resources**

Who will work on this

**Time estimate**

How much time will it take in man-weeks

**Targeted Release**

10.2 (August 06), 10.3 (March 2007), 10.4 (August 2007), Future (beyond FY07)

- |   |  |      |
|---|--|------|
| <ol style="list-style-type: none"><li>1. Ray (pyramid code)</li><li>2. ?? (tet cleanup code)</li><li>3. Ray (multi-elements)</li><li>4. Randy (GUI)</li></ol> | <ol style="list-style-type: none"><li>3</li><li>12</li><li>8</li><li>4</li></ol> | 10.2 |
|---|--|------|

**Submitted By:**

Ray Meyers	27 March 2006
------------	---------------

**Date:**